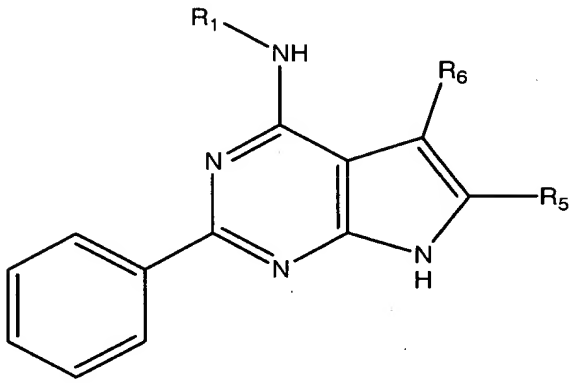
aldehydes and ketones are Schiff bases, oximes, acetals (ketals), enol esters, oxazolidines, and thiazolidines (Table 8.3). A more complete review of bioreversible derivatives of the functional groups was written by Bundgaard.--

In the Claims

Please cancel claims 1-7, 12-14, 16, 17, 19, 21, 24, 25, 28, 30, 32, 35, 38, 39, 49, 51, 59 and 75 without prejudice or disclaimer to applicants rights to pursue the subject matter of these claims in this or a related application.

Please add new claims 76-133 as follows:

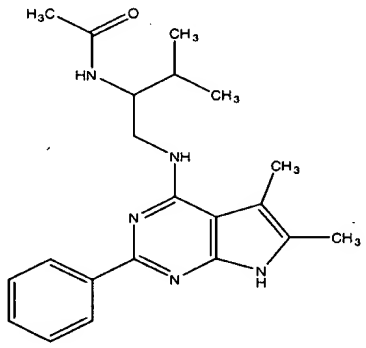
76. (New) A compound having the structure:



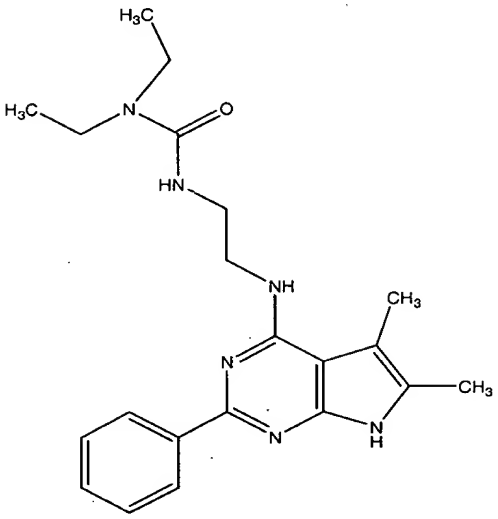
wherein R_1 is 3-hydroxy cyclopentyl ethylamino carbonylamino propyl, N,N-diethylamino carbonylamino ethyl, thioacetamido ethyl, 3-amino acetyloxy cyclopentyl, 3-hydroxy cyclopentyl, 2-pyrrolyl carbonyl aminoethyl, 2-imidazolidinone ethyl, 1-aminocarbonyl-2-methyl propyl, 1-aminocarbonyl-2-phenyl ethyl, 3-hydroxy azetidino, 2-imidazolyl ethyl, acetamido ethyl, 1-(R)-phenyl-2-hydroxyethyl, or N-methylaminocarbonyl pyridyl-2- methyl;

wherein R_5 and R_6 are independently H, substituted or unsubstituted alkyl, or aryl.

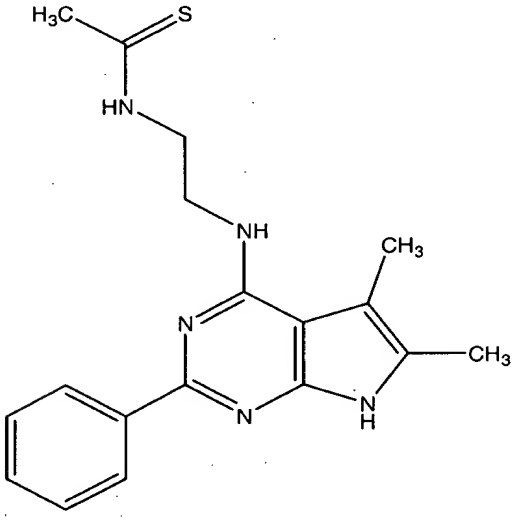
77. (New) The compound of claim 76, having the structure:



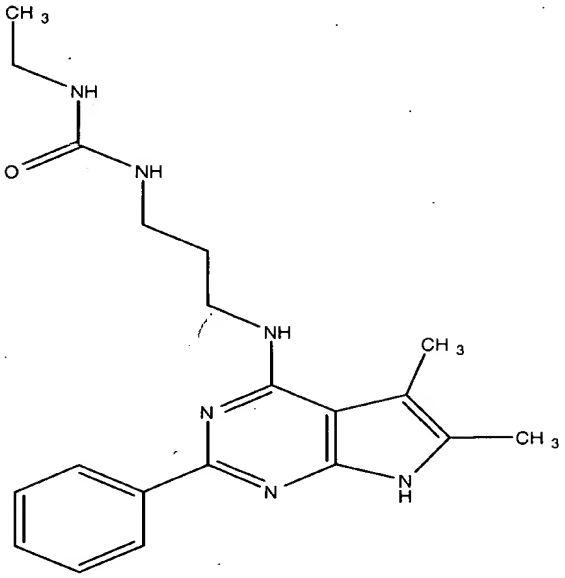
78. (New) The compound of claim 76, having the structure:



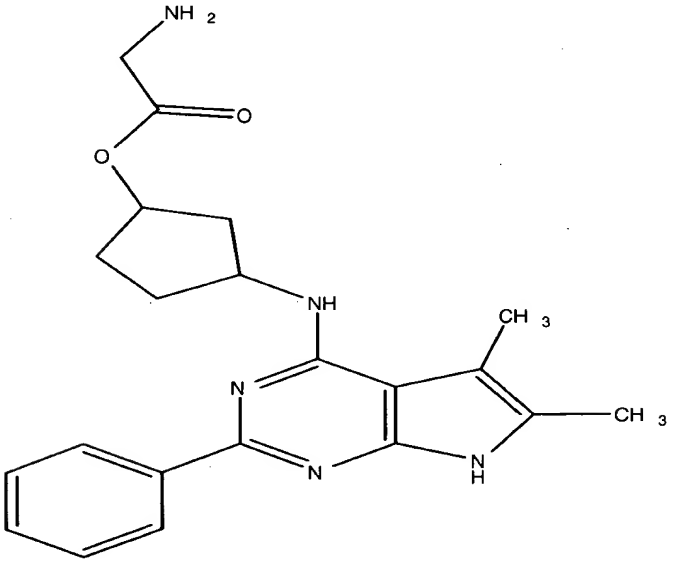
79. (New) The compound of claim 76, having the structure:



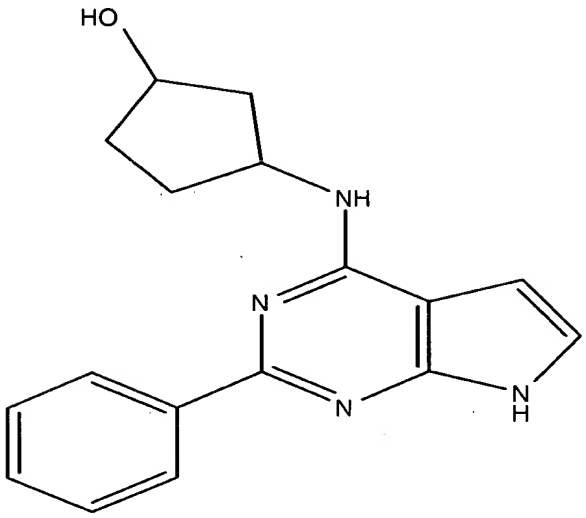
80. (New) The compound of claim 76, having the structure:



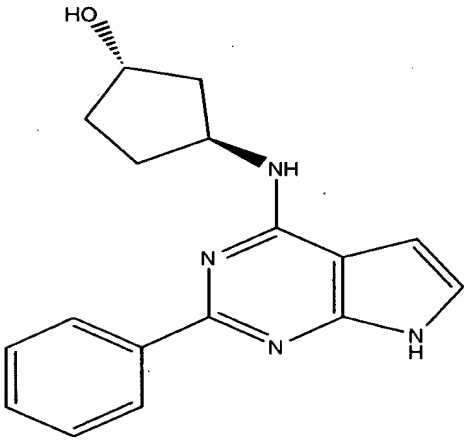
81. (New) The compound of claim 76, having the structure:



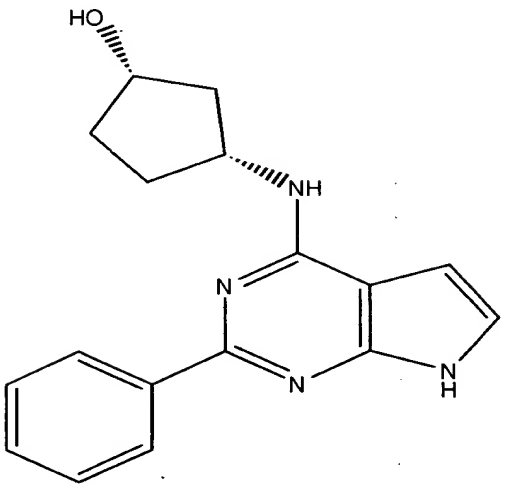
82. (New) The compound of claim 76, having the structure:



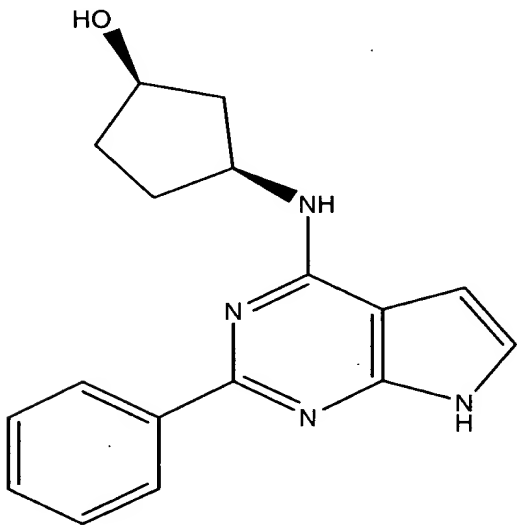
83. (New) The compound of claim 82, having the structure:



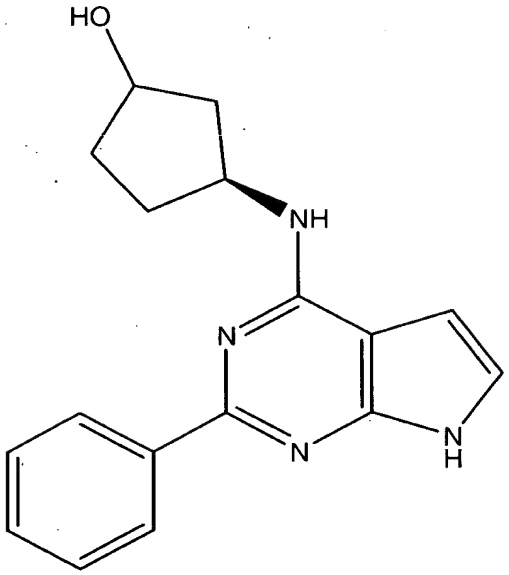
84. (New) The compound of claim 82, having the structure:



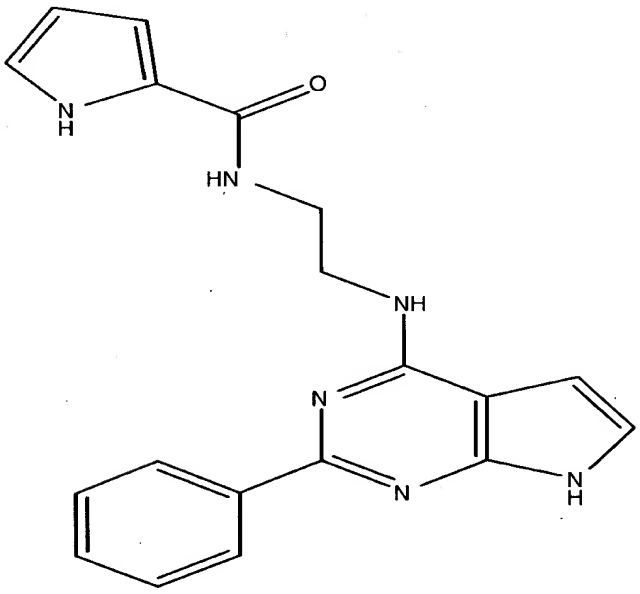
85. (New) The compound of claim 82, having the structure:



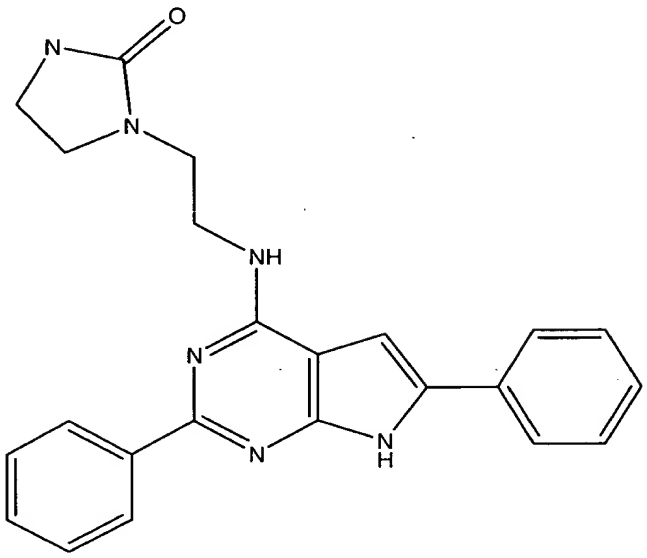
86. (New) The compound of claim 82, having the structure:



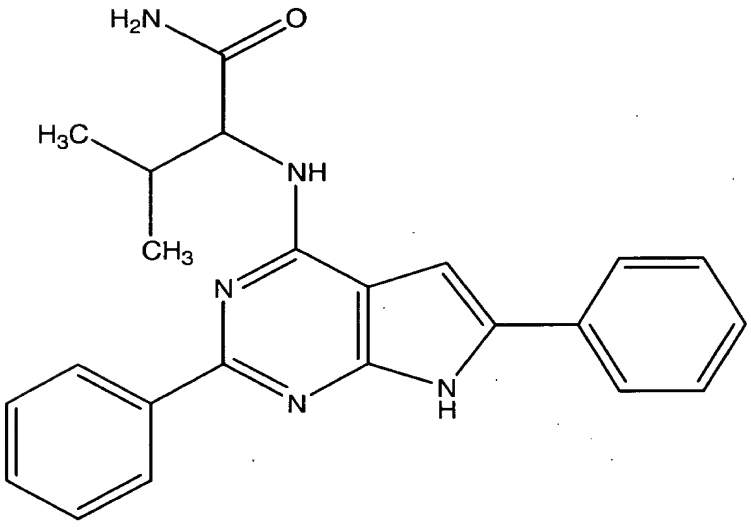
87. (New) The compound of claim 76, having the structure:



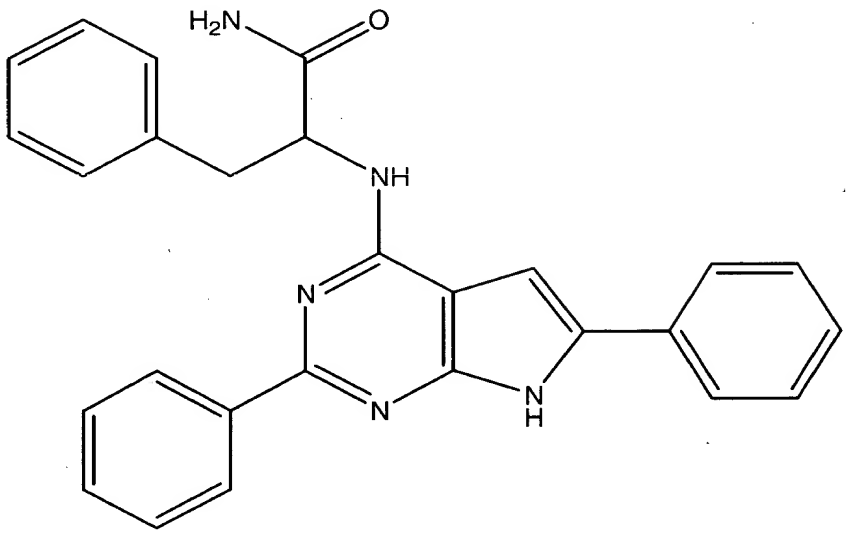
88. (New) The compound of claim 76, having the structure:



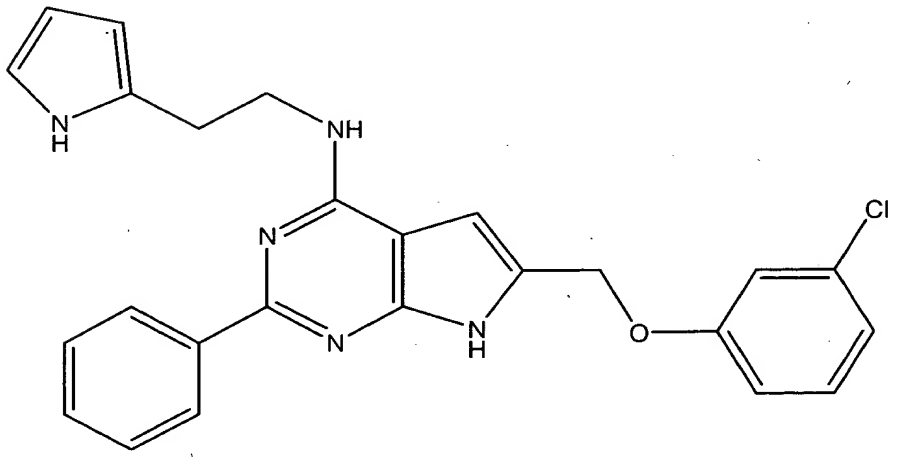
89. (New) The compound of claim 76, having the structure:



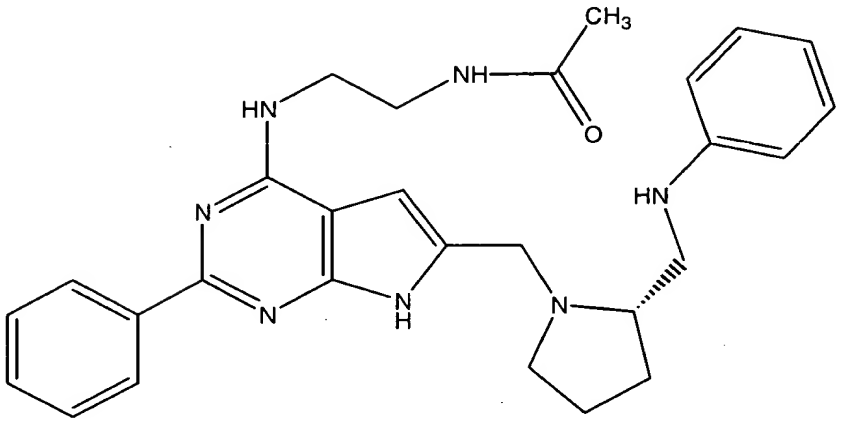
90. (New) The compound of claim 76, having the structure:



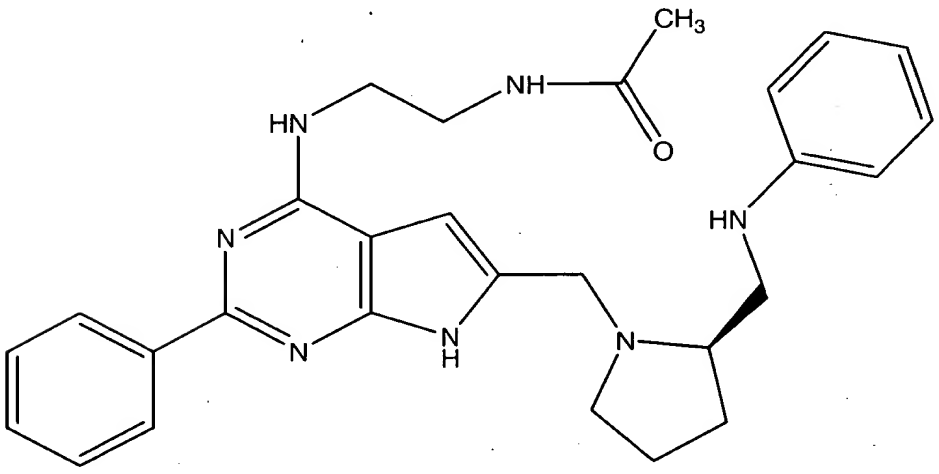
91. (New) The compound of claim 76, having the structure:



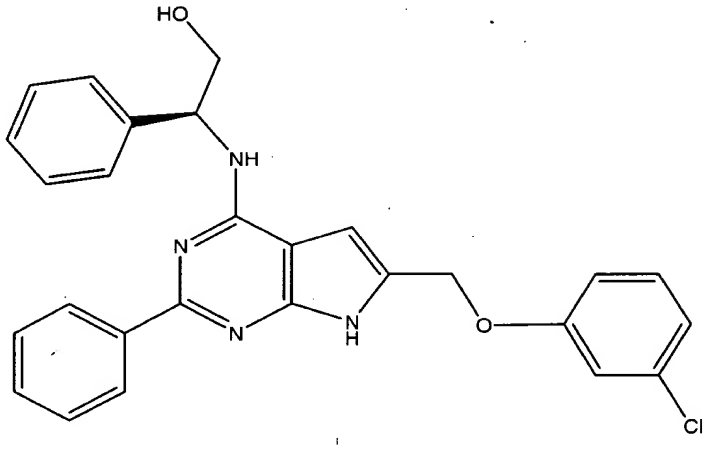
92. (New) The compound of claim 76, having the structure:



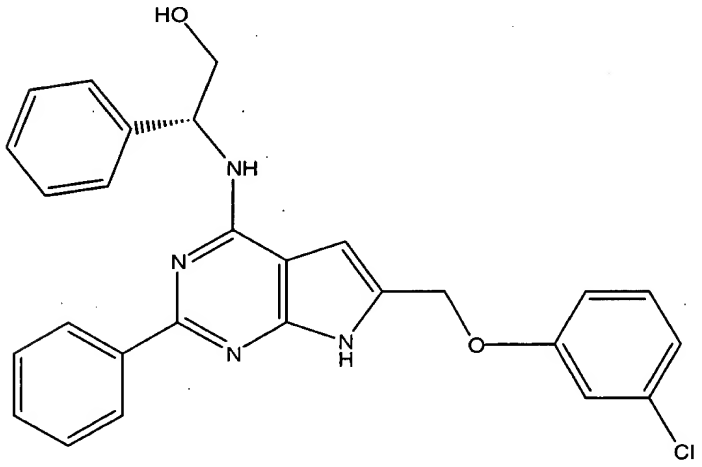
93. (New) The compound of claim 92, having the structure:



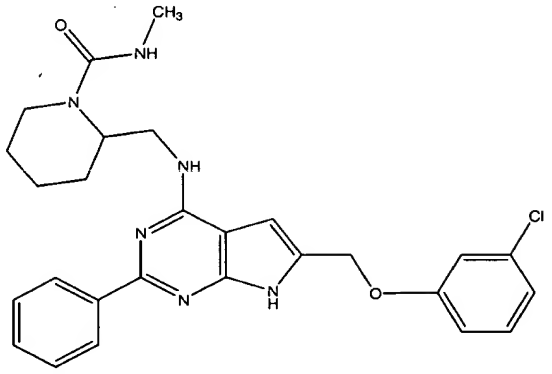
94. (New) The compound of claim 76, having the structure:



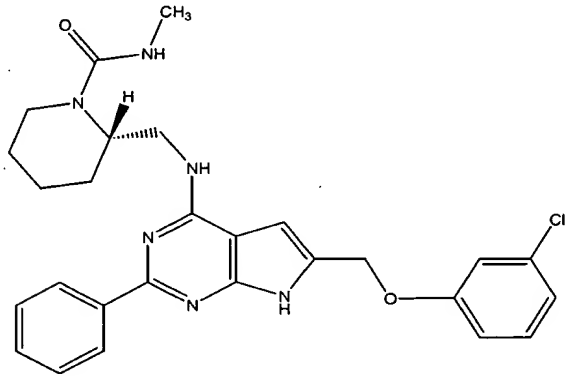
95. (New) The compound of claim 94, having the structure:



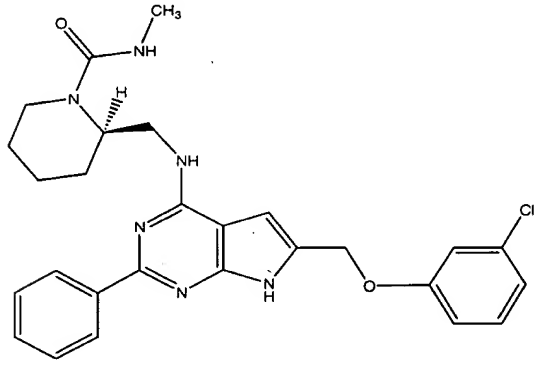
96. (New) The compound of claim 76, having the structure:



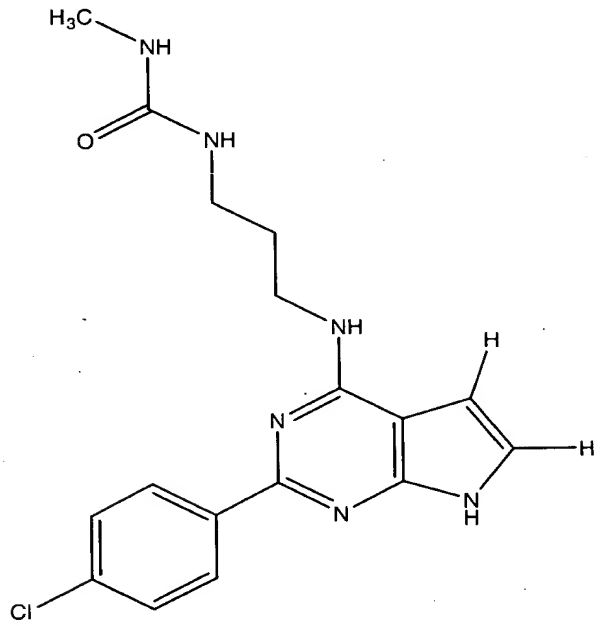
97. (New) The compound of claim 96, having the structure:



98. (New) The compound of claim 96, having the structure:



99. (New) A compound having the structure:



100. (New) A method for treating a disease associated with an A3 adenosine receptor in a subject in need of such treatment, comprising administering to the subject a therapeutically effective amount of the compound of claim 76 or 99 so as to thereby treat the disease associated with the A3 adenosine receptor in the subject, wherein the disease associated with the A3 adenosine receptor is cardiac hypoxia, cerebral ischemia, diuresis, myocardial ischemia, bronchoconstriction or diabetes.

101. (New) The method of claim 100, wherein the subject is a mammal.

102. (New) The method of claim 101, wherein the mammal is a human.

103. (New) A prodrug of the compound of claim 76 or 99, wherein the prodrug is metabolized *in vivo* by a human subject to an active drug which selectively inhibits the A3 adenosine receptor wherein the prodrug is

an ester of an alcohol or carboxylic acid group, if such a group is present in the compound;
an acetal or ketal of an alcohol group, if such a group is present in the compound;
an N-Mannich base or an imine of an amine group, if such a group is present in the compound; or
a Schiff base, oxime, acetal, enol ester, oxazolidine, or thiazolidine of a carbonyl group, if such a group is present in the compound.

104. (New) The prodrug of claim 103, wherein the prodrug is water-soluble.

105. (New) The prodrug of claim 103, wherein said prodrug is metabolized *in vivo* by esterase catalyzed hydrolysis.

106. (New) A pharmaceutical composition comprising the prodrug of claim 103 and a pharmaceutically acceptable carrier.

107. (New) The pharmaceutical composition of claim 106, wherein said pharmaceutical composition is an ophthalmic formulation.

108. (New) The pharmaceutical composition of claim 106, wherein said pharmaceutical composition is an periocular, retrobulbar or intraocular injection formulation.

109. (New) The pharmaceutical composition of claim 106, wherein said pharmaceutical composition is a systemic formulation.

110. (New) A method for inhibiting the activity of an A3 adenosine receptor in a cell that is subjected to abnormal stimulation of the A3 adenosine receptor, which comprises contacting the cell with a compound of claim 76 or 99, so as to inhibit the activity of the A3 adenosine receptor.

111. (New) A method for treating a gastrointestinal disorder associated with an A3 adenosine receptor in a subject in need of such treatment, comprising administering to the subject a therapeutically effective amount of the compound of claim 76 or 99, so as to thereby treat the gastrointestinal disorder in the subject.

112. (New) The method of claim 111, wherein said disorder is diarrhea.

113. (New) The method of claim 112, wherein the subject is a human.

114. (New) A method for treating a respiratory disorder associated with an A3 adenosine receptor in a subject in need of such treatment, comprising administering to the subject a therapeutically effective amount of the compound of claim 76 or 99, so as to thereby treat the respiratory disorder in the subject, wherein the respiratory disorder is asthma, chronic obstructive pulmonary disease, allergic rhinitis or an upper respiratory disorder.

115. (New) The method of claim 114, wherein the subject is a human.

116. (New) A method for treating inflammation of the eye associated with an A3 adenosine receptor in a subject in need of such treatment, which comprises administering to the subject a therapeutically effective amount of the compound of claim 76 or 99 so as to thereby treat the inflammation of the eye in the subject.

117. (New) A method for treating a disease associated with an A3 adenosine receptor in a subject in need of such treatment, comprising administering to the subject a therapeutically effective amount of a compound of claim 76 or 99 so as to

thereby treat the disease associated with the A3 adenosine receptor in the subject, wherein the disease associated with the A3 adenosine receptor is associated with mast cell degranulation or eosinophil activity.

118. (New) The method of claim 117 wherein the subject is human.

119. (New) A method for treating a disease associated with an A3 adenosine receptor in a subject in need of such treatment, comprising administering to the subject a therapeutically effective amount of a compound of claim 76 or 99 so as to thereby treat the disease associated with the A3 adenosine receptor in the subject, wherein the disease associated with the A3 adenosine receptor is asthma, glaucoma, retinopathy, ocular ischemia, or macular degeneration.

120. (New) The method of claim 119, wherein the subject is human.

121. (New) The method of claim 119, wherein the disease is asthma.

122. (New) The method of claim 119, wherein the disease is glaucoma.

Use claim

Improper No positive method step

123. (New) A combination therapy for glaucoma, comprising the compound of claim 76 or 99, and a prostaglandin agonist, β2 agonist, or a muniscrinic antagonist.

124. (New) A pharmaceutical composition comprising a therapeutically effective amount of the compound of claim 76 or 99 and a pharmaceutically acceptable carrier.

125. (New) The pharmaceutical composition of claim 124, wherein said therapeutically effective amount is effective to treat

a respiratory disorder or a gastrointestinal disorder.

126. (New) The pharmaceutical composition of claim 125, wherein said gastrointestinal disorder is diarrhea.

127. (New) The pharmaceutical composition of claim 125, wherein said respiratory disorder is asthma, allergic rhinitis, or chronic obstructive pulmonary disease.

128. (New) The pharmaceutical composition of claim 124, wherein said pharmaceutical composition is an ophthalmic formulation.

129. (New) The pharmaceutical composition of claim 124, wherein said pharmaceutical composition is an periocular, retrobulbar or intraocular injection formulation.

130. (New) The pharmaceutical composition of claim 124, wherein said pharmaceutical composition is a systemic formulation.

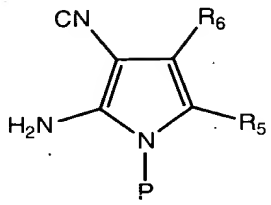
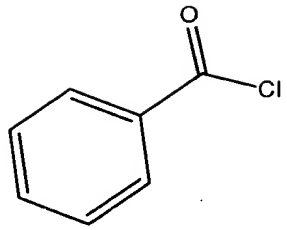
131. (New) The pharmaceutical composition of claim 124, wherein said pharmaceutical composition is a surgical irrigating solution.

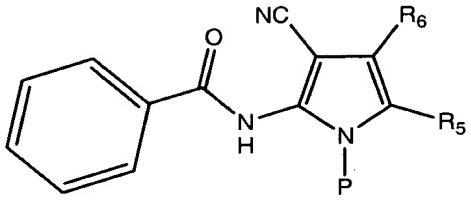
132. (New) A packaged pharmaceutical composition for treating a disease associated with A_3 adenosine receptor in a subject, comprising:

(a) a container holding a therapeutically effective amount of the compound of claim 76 or 99; and

(b) instructions for using said compound for treating said disease in a subject.

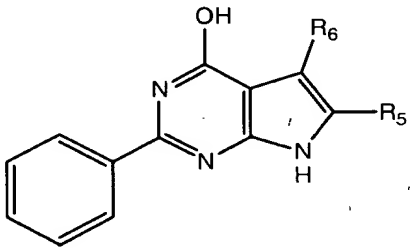
133. (New) A method of preparing the compound of claim 76, comprising the steps of

a) reacting  and 

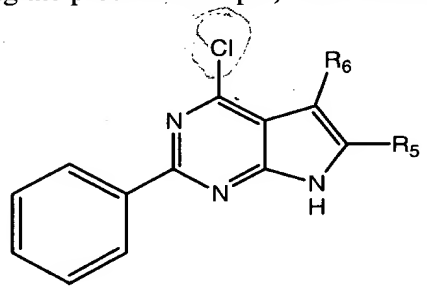
to provide 

wherein P is a removable protecting group;

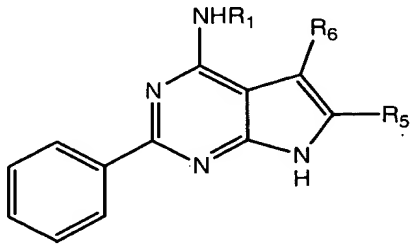
b) treating the product of step a) under cyclization conditions to provide

 ;

c) treating the product of step b) under suitable conditions to provide

 ; and

d) treating the chlorinated product of step c) with NH_2R_1 to provide



wherein R_1 is 3-hydroxy cyclopentyl ethylamino carbonylamino propyl, N,N-diethylamino carbonylamino ethyl, thioacetamido ethyl, 3-amino acetyloxy cyclopentyl, 3-hydroxy cyclopentyl, 2-pyrrolyl carbonyl aminoethyl, 2-imidazolidinone ethyl, 1-aminocarbonyl-2-methyl propyl, 1-aminocarbonyl-2-phenyl ethyl, 3-hydroxy azetidino, 2-imidazolyl ethyl, acetamido ethyl, 1-(R)-phenyl-2-hydroxyethyl, or N-methylaminocarbonyl pyridyl-2- methyl;

wherein R_5 and R_6 are independently H, substituted or unsubstituted alkyl, or aryl.